I. INTRODUCTION

Plaintiff glosses over the numerous data and methodological flaws identified in Defendants' motion by summarily arguing that, at most, those sources of unreliability are "proper issue[s] for cross examination, not a sufficient basis for exclusion" of Rodenburg's testimony. ECF No. 496 at 4, 9. In so arguing, Plaintiff attempts to distance itself from clear, binding deposition admissions establishing that Rodenburg failed to engage in "sound science" and employed a scientifically indefensible methodology in reaching conclusions that are diametrically opposed to those she previously presented at Rutgers University before she was retained in this case. As discussed herein, Rodenburg's reliance on unreliable data, and unfounded "take my word for it" methodology, flunks the *Daubert* inquiry.

II. ARGUMENT

A. The Data Underlying Rodenburg's Opinions are Unreliable

Rodenburg admits that she cannot vouch for the representativeness of the sampling data that she reviewed. ECF No. 503-1 at 513 (103:19–104:3) (Rodenburg cannot say whether the data was "representative of the entire river for 12 months out of the year"); *Id.* (105:13-24) (Rodenburg "did not look at" whether PCB concentrations and congener patterns in the Spokane River or County of Spokane wastewater treatment system were materially different during high versus low flow seasons). Nevertheless, and despite these clear admissions, Plaintiff baldly asserts that Rodenburg "was able to determine that the surface water data was representative of the entire range of typical flow conditions in the Spokane River" and "was aware that the surface water data was representative of the River spatially and in terms of river flow." ECF No. 496 at 4. Rodenburg's admissions

2

4

5

6

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

belie Plaintiff's argument, and her inability to vouch for the representativeness of the data she reviewed precludes Rodenburg from making river-wide pronouncements on Aroclor versus byproduct PCB concentrations. Fed. R. Evid. 702; Waskowski v. State Farm, 970 F. Supp. 2d 714, 723 (E.D. Mich. 2013). Tellingly, Plaintiff does not address Rodenburg's failure to verify that proper QA/QC measures were followed by the sampling labs, despite Rodenburg's admission that, without appropriate QA/QC, it is impossible to determine whether data is valid. ECF No. 503-1 at 512 (95:23–96:4). Rather than verify that proper QA/QC measures were adhered to, Rodenburg testified that she simply "assume[d] that the data is valid" because it was downloaded from a state database. *Id.* (95:7– 96:17). Rodenburg admits that she did not review any of the QA/QC manuals, guidelines, protocols, logbooks, chain of custody records, equipment maintenance records, source and certification standards, formulae or algorithms that were employed, if any, by the labs. ECF No. 403-1 at 98-100 (92:4-23, 95:23–96:4); see also Declaration of David. S. Haase ("Haase Decl."), Ex. 10 at 93-94. In addition to QA/QC, blank correction is necessary to ensure that PCBs found in samples are not derived from lab or field contamination. ECF No. 403-1 at 125 (173:17-24). Plaintiff claims that Rodenburg "did an extensive review of blank correction procedures for the surface water data and other studies that she ¹ Rodenburg recently reported that blank concentrations (88 pg/L) accounted for more than 50% of sampling data concentrations (171 pg/L) in the Spokane River. See Haase Decl., Ex. 11 (Rodenburg, et al. (2020)).

4

5

6

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

highest R² values for the MLR were found for [products including] CIPP (cured in place piping) (0.64))" (ECF No. 403-1 at 41) while the City of Spokane reported that the same CIPP samples "did not appear to correlate with Aroclor patterns." See Haase Decl., Ex. 10 at 279:23–280:16 (emphasis added); see also ECF No. 427-2 at 30. Put simply, Rodenburg's analysis and findings are at odds with the City's own conclusions, despite her self-serving statement that "[her] results are in agreement with those of the authors of [City (2015)]." ECF No. 403-1 at 41. Finally, Plaintiff attempts to paper-over admissions that Rodenburg did not input raw data accurately, and failed to engage in "sound science", by claiming that such errors "had no effect on Dr. Rodenburg's expert opinions and conclusions." ECF No. 496 at 5. Whether Rodenburg's opinions changed in light of the numerous scientific shortcomings explored during her deposition is immaterial. The issue before the Court is whether Rodenburg's "testimony reflects" scientific knowledge . . . derived by the scientific method" and whether her opinions are the product of "good science." Daubert II, 43 F.3d at 1315. By her own admissions, Rodenburg's opinions do not satisfy the *Daubert* inquiry. Plaintiff's post-hoc attempt to rehabilitate Rodenburg is both improper and unavailing. Luke v. Family Care & Urgent Med. Clinics, 323 F. App'x 496, 500 ⁴ Rodenburg admitted that she failed to engage in "sound science" by reporting the presence of Aroclor PCBs in at least 31 samples which returned negative coefficients—signifying that no such Aroclors were present. ECF No. 403-1 at 131-70 at (189:18–190:22, 191:10–228:2). Rodenburg also admits that she failed to accurately input raw data, resulting in a sixteen-fold underestimation of byproduct PCB concentrations for some data. *Id.* at 194-95 (276:9–277:14).

(9th Cir. 2009) (holding that the district court did not err in excluding plaintiff's untimely expert declarations which "asserted a new theory of causation" and "impermissibly attempted to fix the weakness" identified by the defendants).

B. Rodenburg Employed an Unreliable Methodology

The Federal Rules of Evidence and *Daubert* jurisprudence are "safeguard[s] against the menace of unscientific methods and manipulative statistics." *Karlo v. Pittsburgh Glass Works, LLC*, 849 F.3d 61, 76 (3d Cir. 2017). Contrary to principles of good science, Rodenburg engaged in various statistical sleights-of-hand to reach her conclusion that the Spokane River is predominated by Aroclor PCBs. ECF No. 403-1 at 4.

First, as Plaintiff concedes, Rodenburg "did not compare samples to byproduct PCB patterns" and instead, "compared sampling data [only] to Aroclor PCB patterns" ECF No. 496 at 6. Instead of numerically comparing sampling data to Aroclor and byproduct PCB patterns—which Rodenburg admits she could have done (ECF No. 403-1 at 108-09 (130:14—131:13)—Rodenburg compared sampling data only to Aroclors 1016, 1242, 1248, 1254 and 1260. ECF No. 403-1 at 106, 129-30 (128:8-12, 187:7–188:11). As a result, her analyses were rigged to undercount the concentration of byproduct PCBs in sampling data in favor of Aroclors. Unsurprisingly, Plaintiff asserts that there "was no undercounting of byproduct PCBs" (ECF No. 496 at 6) without addressing clear admissions that Rodenburg failed to consider numerous congeners, products, and manufacturing processes associated with byproduct PCBs when forming her opinions. ECF No. 402 at 9, 12.

Plaintiff also claims that, by comparing sampling data only to Aroclors,

4

5

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

"Rodenburg was following the methodology used by the authors of multiple peerreviewed papers." ECF No. 496 at 6 (citing Exs. 10-12). Exhibits 10-12 neither sought to identify the presence nor quantify the proportion of byproduct PCB sources to environmental compartments. See ECF No. 505 at 170-200. Because it was not their objective, the authors of those publications are not incorrect in evaluating the fit between model output and only Aroclors. *Id.* This does not, however, excuse Rodenburg from inappropriately applying their methodology to a different end, namely, the identification of Aroclor and byproduct sources of sampling data. ECF No. 403-1 at 6. Moreover, none of these exhibits report on the admittedly scientifically indefensible R² cutoff values she employed. *Id*. Before being retained as a litigation expert in this case, Rodenburg described byproduct PCBs as the "main problem" facing the Spokane River during an academic seminar she presented at Rutgers University. ECF No. 403-1 at 88-89 (72:17–73:20). Recognizing that this presents a tremendous problem for their case, Plaintiff attempts to quarantine Rodenburg's statement to the "Spokane County Regional Water Reclamation Facility." ECF No. 496 at 2. However, Rodenburg admitted as she must that both the County and the City Water Reclamation Facilities discharge to the same River. Haase Decl., Ex. 10 at 75:15–76:6. Further, Rodenburg attributed this statement to "one of the cities suing Monsanto" who can "try to do a lot of things to remove the Aroclor-type PCBs from their system, but that's not their main problem" which is "PCB-11 [from] pigments." ECF No. 403-1 at 88-89 (72:17–73:12) (emphasis added). As Plaintiff aptly notes, "Spokane County is not a plaintiff in this lawsuit " ECF No. 496 at 2. Nevertheless, and despite her prior position, Rodenburg purports to testify in this case that PCBs in

1 the Spokane River came from Monsanto, while simultaneously admitting that she 2 failed to consider numerous byproduct PCB sources. ECF No. 403-1 at 88-89. 3 *Next*, where sampling data did not numerically match an Aroclor, 4 Rodenburg gave it a second shot at 'becoming' an Aroclor by comparing the data 5 to "what she knew", subjectively, in her own mind, about byproduct PCBs. ECF No. 403-1 at 106-08 (128:21–130:18). Further exacerbating the inaccuracy of this purely subjective approach, Rodenburg mentally considered only those byproduct PCB congeners found in pigments and silicones—primarily PCBs 11 and 209— 9 despite admitting that more than 200 manufacturing processes have been identified 10 as generating byproduct PCBs, and 128 individual congeners have been identified 11 as byproduct in nature. *Id.*; ECF No. 402 at 9. Rodenburg's "take my word for it" 12 approach does not amount to a reliable, verifiable scientific methodology. 13 Whisnant v. United States, 2006 WL 2861112, at *3 (W.D. Wash. Oct. 5, 2006); 14 Henricksen v. ConocoPhillips Co., 605 F. Supp. 2d 1142, 1153 (E.D. Wash. 2009). 15 *Third*, to the extent that Rodenburg *did* numerically compare sampling data 16 to Aroclors 1016, 1242, 1248, 1254 and 1260, she employed a methodology that 17 admittedly has never been subjected to peer-review, and is scientifically 18 indefensible. ECF No. 403-1 at 113-19 (135:12–142:2). Plaintiff attempts to 19 overcome this glaring deficiency by arguing that the R² values employed by 20 Rodenburg were used in a recent peer-reviewed publication, attached as Exhibit 8 21 to Plaintiff's opposition. ECF No. 496 at 7. Nowhere in Exhibit 8 does Rodenburg discuss the use or validity of the R² cutoff values employed in this case. ECF No. 22 23 503-1 at 646-567. Again, Plaintiff is requesting that the Court impermissibly accept Rodenburg's "take my word for it" methodology as true. Plaintiff also fails 24

1 to address Rodenburg's admission that she *cannot scientifically disprove* the use of R² values contrary to those she employed in her own analyses. ECF No. 403-1 at 115-16 (138:18–139:11).⁵ This admission is dispositive of the inquiry, and 4 demonstrates that her conclusions do not reflect "scientific knowledge" as 5 mandated by *Daubert*. *Daubert II*, 43 F.3d at 1315. 6 Fourth, Plaintiff attempts to separate itself from Rodenburg's admission that the analysis used by Burkhard & Weininger (Exhibit 13 to Plaintiff's opposition) is 8 "similar to [the] MLR" employed by Rodenburg. ECF No. 403-1 at 117-18 9 (140:2–141:12). Indeed, Rodenburg claims in her report that the methodology employed by Burkhard & Weininger—using an R² cutoff value of 0.9 to signify 10 11 the presence of Aroclors—"has been widely used to determine PCB sources" and 12 that her own analysis "follows [their] scheme." ECF No. 403-1 at 10-11 13 (Rodenburg Rpt.). The first sentence of the Burkhard & Weininger report makes 14 clear that the COMSTAR analysis they employed is a "regression analysis" that 15 "determines the best combination of the commercial PCB mixtures which best fits 16 the chromatographic fingerprint of the sample" ECF No. 506 at 2 (emphasis 17 added). Thus, Plaintiff's position that the cutoff values employed by Burkhard and Weininger "bear no relationship to the R² values used [by] Dr. Rosenburg's [sic]" 18 19 is disingenuous at best. See also ECF No. 403-1 at 172 (237:15-18) (Rodenburg 20 21 ⁵ That the R² cutoff values employed by Rodenburg "were previously used in the 22 Green-Duwamish River study" (ECF No. 496 at 7) does not render them 23 scientifically defensible, especially in light of Rodenburg's admission that she 24 cannot disprove the use of alternative figures.

confirmed that the R² values she employed "tell[] you the extent to which that 1 2 sample looks like a particular pattern"). Fifth, Plaintiff attempts to run away from Rodenburg's admission that her 3 interpretation of R² values as percentage-weight of Aroclor PCBs is not backed by 4 5 any peer-reviewed publication or study. ECF No. 496 at 8; see also ECF No. 403-1 at 173 (238:2-14). This is another instance where Plaintiff asks the Court to impermissibly accept conclusions supported only by something of Rodenburg's 8 own creation, that has never been published nor subjected to peer-review. ECF No. 9 403-1 at 173 (238:2-14); *Henricksen*, 605 F. Supp. 2d at 1153. 10 *Next*, Plaintiff mischaracterizes Monsanto's position regarding Rodenburg's 11 failure to consider alternative PCB sources. Plaintiff begins by claiming that 12 Rodenburg did consider atmospheric deposition as a potential source of PCBs. See 13 ECF No. 496 at 8. Again, Plaintiff's position is belied by Rodenburg's sworn 14 testimony that she did *not* consider the extent to which atmospheric deposition of 15 PCBs produced in Asia may have impacted the Spokane River watershed. ECF No. 16 403-1 at 97 (91:3-7). Moreover, Plaintiff's position that Rodenburg's "analysis 17 looks at whether [sampling data] resemble Monsanto's Aroclors . . . so whether 18 Rodenburg considered atmospheric deposition of PCBs from Asia is not relevant" 19 (ECF No. 496 at 8) oversimplifies the inquiry given Rodenburg's admission that 20 she *cannot differentiate* between foreign-made PCBs and Aroclors manufactured 21 by Monsanto. ECF No. 403-1 at 96 (90:2-19). 22 Finally, regarding the Inland Empire Paper ("IEP") facility, Plaintiff 23 emphasizes Rodenburg's proffered conclusion that IEP's effluent "match[es] the profile of Aroclor 1242 with R² values as high as 0.94 when PCB-11 is excluded." 24

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

trial under Rule 702.

Setting aside the statistical sleight-of-hand in excluding byproduct PCB-11, which is "ubiquitous in the air worldwide" (ECF No. 421-17 at 10 (38:13-20)) and "virtually unfound in commercial Aroclors" (ECF No. 421-18 at 6 (26:11-21) ("Rodenburg SD Dep.")), the fact that Rodenburg found Aroclor 1242 in this sampling data demonstrates precisely how flawed her methodology is. No party who has *ever* reviewed the effluent at IEP—other than Rodenburg—has reported the presence of Aroclor PCBs. IEP maintains that it was a PCB-free mill until it began recycling in 1991, and that PCBs in its effluent originate from inks in paper its recycles. ECF No. 403-1 at 182. An engineering firm hired by the SRRTTF similarly reported that "[i]nadvertent PCBs in [IEP's] effluent correlated with PCBs in pigments used on the paper products they recycle" rather than Aroclor PCBs contained in NCR paper. ECF No. 403-1 at 183-84 (258:15–259:10). Moreover, Rodenburg is unaware of any evidence that IEP ever used NCR paper in its recycling processes. *Id.* at 181 (254:2-5). Nevertheless, to save face in light of the overwhelming weight of evidence demonstrating that PCBs in IEP's effluent are byproduct in nature, Rodenburg speculates that NCR paper must be recycled there to account for the inexplicable presence of Aroclor 1242 that she reports. ECF No. 403-1 at 40. Rodenburg's position is belied by the evidence of record concerning IEP's effluent, and demonstrates her repeated practice of engaging in statistical manipulations to whittle away evidence contrary to her proffered conclusions. III. **CONCLUSION** For the foregoing reasons, Rodenburg's opinions should be excluded from

awong@shb.com barber@shb.com

sihansen@shb.com

(Admitted Pro Hac Vice)

Adam E. Miller, MO Bar No. 40945

22

23

24

CERTIFICATE OF SERVICE 1 I certify that on February 21, 2020, I caused the foregoing to be electronically 2 filed with the Clerk of the Court using the CM/ECF System which in turn 3 automatically generated a Notice of Electronic Filing (NEF) to all parties in the case 4 who are registered users of the CM/ECF system. The NEF for the foregoing 5 specifically identifies recipients of electronic notice. 6 7 s/ Thomas M. Goutman 8 Thomas M. Goutman, PA Bar No. 30236 (Admitted Pro Hac Vice) SHOOK HARDY & BACON LLP 9 Two Commerce Square 2001 Market Street, Suite 3000 10 Philadelphia, PA 19103 P: (215) 575-3136 11 tgoutman@shb.com 12 Attorney for Defendants Monsanto Company, Solutia Inc., and Pharmacia LLC 13 14 15 16 17 18 19 20 21 22 23 24